Claims

1-11. (canceled)

12. (currently amended) A method for identifying an agent that inhibits T lymphocyte ~~differentiation and/or modulates B cell~~ development, the method comprising:

(a) assaying ~~a cellular activity of an~~ inositol 1,4,5-trisphosphate 3-kinase B (IP3KB) ~~or a functional derivative thereof having at least 90 % sequence identity with a sequence encoding IP3KB,~~ in the presence of a test agent;

(b) ~~to~~ identifying one or more ~~modulating~~ agents that inhibit the cellular ~~activity~~ level or kinase activity of ~~the~~ IP3KB; and

(c~~b~~) testing said one or more ~~of the modulating~~ agents for ability to inhibit T lymphocyte development at the double positive stage ~~or function and/or modulate B cell development~~; thereby identifying an agent that ~~modulates~~ inhibits the production of mature T lymphocyte ~~differentiation and/or modulates B cell development~~.

13. (canceled)

14. (currently amended) The method of claim 12, wherein said one or more ~~modulating~~ agents identified in step (b~~a~~) inhibit kinase activity of the IP3KB.

15. (previously presented) The method of claim 14, wherein the kinase activity is to catalyze conversion of inositol 1,4,5-triphosphate (IP3) to inositol 1,3,4,5-tetrakisphosphate (IP4).

16. (currently amended) The method of claim 12, wherein ~~the modulating~~ said one or more agents identified in step (b) are tested for ability to inhibit $CD4^+$ $CD8^+$ T cell development into $CD4^+$ or $CD8^+$ T cells.

17-27. (canceled)

28. (currently amended) The method of claim 12, wherein the IP3KB has an amino acid sequence of Accession No. CAB65055, Accession No. CAC40660, Accession No. NP_002212 or SEQ ID NO: 1~~, or a sequence having at least 90 % sequence identity with any of these sequences~~.

29. (currently amended) The method of claim 12, wherein the IP3KB is encoded by a polynucleotide having a nucleotide sequence of SEQ ID NO: 2, 3, or 4~~, or a sequence having at least 90 % sequence identity with any of these sequences~~.

30. (currently amended) The method of claim 12, wherein said one or more ~~modulating~~ agents identified in step (b~~a~~) decrease cellular levels of IP3KB in a cell.

31. (previously presented) The method of claim 30, wherein the cell is selected from the group consisting of thymus cell, $CD4^+$ $CD8^+$ T cell, $CD4^+$ T cell, $CD8^+$ T cell, and NK cell.

32. (currently amended) The method of claim 30, wherein said one or more ~~modulating~~ agents identified in step (b~~a~~) inhibit the expression of a gene encoding IP3KB.

33-38. (canceled)

39. (new) The method of claim 1, wherein step c) comprises testing said one or more agents for ability to inhibit T lymphocyte development in the thymus.